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GB/T 50152-2012

**Standard for Test Method of Concrete
Structures**

混凝土结构试验方法标准

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**the Ministry of Housing and Urban-Rural Development
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Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

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Announcement on Publishing the National Standard of "Standard for Test Method of Concrete Structures"

"Standard for Test Method of Concrete Structures" has been approved as a national standard with a serial number of GB/T 50152-2012, and shall be implemented on August 1, 2012. The former "Testing Methods of Concrete Structure" GB 50152-92 shall be abolished simultaneously.

Authorized by the Research Institute of Standards and Norms of the Ministry of Housing and Urban-Rural Development of the People's Republic of China, this standard is published and distributed by China Architecture and Building Press.

Ministry of Housing and Urban-Rural Development of the People's Republic of China
January 21, 2012

Foreword

According to the requirements of "Notice on Printing the Development and Revision Plan of Engineering Construction Standards and Codes in 2007 (First Batch)" (Document Jian Biao [2007] No. 125) issued by the former Ministry of Construction, this standard is revised from the former national standard of "Testing Methods of Concrete Structure" GB 50152-92 by China Academy of Building Research jointly with the organizations concerned.

This standard is finalized upon review on the basis of widely soliciting for opinions through summarizing and absorbing the mature effective experience and scientific and technical achievements accumulated for many years in China during the revision process.

This standard comprises 11 chapters and 2 appendixes, with the main technical contents: general provisions, terms and symbols, basic requirements, performance of materials, test loading, test measuring, laboratory test, test of prefabricated members, field loading test of structures, monitoring and dynamic tests for structures, safety of test, etc.

This revision adopts the relatively strict test methods for the performance of materials, adds test of prefabricated member products, field loading test, structural monitoring, etc., and incorporates into new equipment, instruments and meters universally used in recent years, summarizes the existing test data and engineering practice experience, adds the structure field loading and measuring methods, supplements and perfects the load-bearing mark and corresponding loading coefficient of members, to make the test judgment have better performability.

The Ministry of Housing and Urban-Rural Development of the People's Republic of China is in charge of the administration of this standard, and China Academy of Building Research is responsible for the explanation of specific technical contents. During the process of implementing this standard, the relevant opinions or advice, whenever necessary, can be posted or passed on to the national standard "Standard for Test Method of Concrete Structures" Administrative Group of China Academy of Building Research (address: No. 30, North Third Ring East Road, Beijing, 100013, China).

Chief development organizations of this standard: China Academy of Building Research
China State Construction International Co., Ltd.

Participating development organizations of this standard: National Center for Test of Building Engineering

Tsinghua University

Tongji University

Chongqing University

Central Institute of Building and Construction of China Metallurgical Group Corp

China Academy of Railway Science

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1 General Provisions

1.0.1 This standard is formulated with a view to ensuring the test quality of concrete structures, studying and correctly evaluating the performance of concrete structures and members, and unifying the test methods of concrete structures.

1.0.2 This standard is applicable to the tests of reinforced concrete structures and prestressed concrete structures of the buildings and general structures, including: laboratory test, test of prefabricated members, field loading test of structures, and tests of structural monitoring and dynamic characteristics. The tests with special requirements, the structural tests under such environment conditions as high temperature, subzero temperature and erosive medium, and other types of tests for concrete structural members shall meet the requirements of the national current relevant standards or the special test requirements.

1.0.3 The tests for concrete structures shall not only comply with the requirements of this standard, but also those of the national current relevant standards.

2 Terms and Symbols

2.1 Terms

2.1.1 Specimen

Object of structural test, a concrete structure or member used for loading and measuring in the test.

2.1.2 Exploratory test

Test for discussing the structural performance and rule for the purpose of scientific research and new technology development (material, process, structural type), etc.

2.1.3 Verifying test

Test for the purpose of verifying scientific research assumption and calculation model and checking the reliability of new technology (material, process, structural type), etc.

2.1.4 Laboratory test

Exploratory test or verifying test for the purpose of simulating the stress state of the structure or member under laboratory conditions.

2.1.5 Test of prefabricated members

Test for the purpose of inspecting the structural performance of prefabricated member products.

2.1.6 Field loading test

Test of loading and measuring on the existing engineering structures on the site.

2.1.7 Structural monitoring

Test of continuous measuring on the structures in construction state or serviceability state.

2.1.8 Test for structural dynamic parameters

Test for dynamic characteristic parameter and dynamic load effect of structures.

2.1.9 Equivalent loading

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